PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of
Setsuo ANDO, et al.

Appln. No.: Not Yet Assigned

Confirmation No.: Not Yet Assigned

Group Art Unit: Not Yet Assigned

Filed: March 06, 2002

Examiner: Not Yet Assigned

For: ELECTROLYTIC COPPER-PLATED R-T-B MAGNET AND METHOD FOR PLATING SAME

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231
Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE CLAIMS:

Please enter the following amended claims:

3. The method for forming an electrolytic copper plating on an R-T-B magnet according to claim 1, wherein said agent for reducing copper ions is formaldehyde.

4. The method for forming an electrolytic copper plating on an R-T-B magnet according to claim 1, wherein said R-T-B magnet contains as a main phase an $R_2T_{14}B$ intermetallic compound, wherein R is at least one of rare earth elements including Y, and T is Fe or Fe and Co.

8. The R-T-B magnet according to claim 5, wherein said electrolytic copper plating layer has pinholes in the number of $0/cm^2$ when measured by a ferroxyl test method (JIS H 8617), and further has a Vickers hardness of 260-350.

9. The R-T-B magnet according to claim 6, wherein a chemical conversion coating layer is formed on a plating layer constituted by said second layer.

12. The R-T-B magnet according to claim 5, wherein it is used for a rotor or an actuator.

IN THE ABSTRACT:

Please insert the following Abstract of the Disclosure:

ABSTRACT

An R-T-B magnet (R is at least one kind of rare-earth elements including Y, and T is Fe or Fe and Co.) has an electrolytic copper-plating film where the ratio [I(200)/I(111)] of the X-ray diffraction peak intensity I(200) from the (200) plane to the X-ray diffraction peak intensity I(111) from the (111) plane is 0.1-0.45 in the X-ray diffraction by CuKal rays. This electrolytic copper-plating film is formed by an electrolytic copper-plating method using an electrolytic copper-plating solution which contains 20-150g/L of copper sulphate and 30-250 g/L of chelating agent and contains no agent for reducing copper ions and has a pH adjusted to 10.5-13.5.

Preliminary Amendment
Attorney Docket No. Q68838

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

3. The method for forming an electrolytic copper plating on an R-T-B magnet according to claim 1 ~~or 2~~, wherein said agent for reducing copper ions is formaldehyde.

4. The method for forming an electrolytic copper plating on an R-T-B magnet according to ~~any one of~~ claims 1 ~~3~~, wherein said R-T-B magnet contains as a main phase an $R_2T_{14}B$ intermetallic compound, wherein R is at least one of rare earth elements including Y, and T is Fe or Fe and Co.

8. The R-T-B magnet according to ~~any one of~~ claims 5 ~~7~~, wherein said electrolytic copper plating layer has pinholes in the number of $0/cm^2$ when measured by a ferroxyl test method (JIS H 8617), and further has a Vickers hardness of 260-350.

9. The R-T-B magnet according to ~~any one of~~ claims ~~6~~ ~~8~~, wherein a chemical conversion coating layer is formed on a plating layer constituted by said second layer.

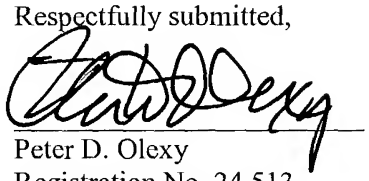
12. The R-T-B magnet according to ~~any one of~~ claims ~~5~~ ~~10~~, wherein it is used for a rotor or an actuator.

Preliminary Amendment
Attorney Docket No. Q68838

REMARKS

Entry and consideration of this Amendment is respectfully requested.

Respectfully submitted,



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